

N° 358



A.D. 1909

Date of Application, 6th Jan., 1909

Complete Specification Left, 1st July, 1909—Accepted, 23rd Dec., 1909

## PROVISIONAL SPECIFICATION.

**"Improvements in, and in the Manufacture of, Anti-friction Appliances for use in connection with Sliding Drawers and Analogous Sliding Articles."**

I, JOSEPH GEORGE ROLLASON, of 57, Soho Hill, Birmingham, Manufacturer, do hereby declare the nature of this invention to be as follows:—

This invention relates to anti-friction bearings or runners for use in connection with sliding drawers and other sliding articles, for the purpose of giving easy running to same and preventing jamming.

The principal object of the present invention is to provide an improved and simplified construction of anti-friction device by which lateral displacement or jamming of the drawer is prevented, and which is capable of being produced at low cost.

Thus according to this invention, under each side of the drawer preferably three (or more) cylindrical or other box-like casings or ball carriers are let into the fixed frame, these carriers being arranged in line along the length of each side of the drawer, two of them being preferably located at or near the opposite ends, and the third at or about the middle. Each carrier contains an anti-friction ball which projects through an opening in the crown, and upon which the drawer is adapted to run. The casing or carrier may be of a cylindrical form and is provided around its upper edge with a flange arranged to act as a stop when let into the frame, and thus ensures all the balls projecting a constant distance above the level of the frame.

Within the bottom of the casing a conical or other support is placed upon the top of which the ball rests.

According to one method of making the device, a cylindrical casing is taken, closed at the bottom, but open at the top, and having a flanged mouth. The conical or other support is then placed within the bottom, and the ball dropped on to the top of the support, so that it projects above the upper end of the casing. The open end of the latter is then closed by a cap pierced with a central hole through which the ball projects, the horizontal middle line coming below said cap. The latter is secured to the casing by turning the edges under the flanged edge of the mouth. Instead of having a separate support within the bottom of the casing, the bottom of the latter may be fetched up into a conical part which extends into the interior of said casing, and upon which the ball rests.

In another method of making the device, a cylindrical casing is taken open at the bottom, but closed at the top. This top is pierced with a circular opening through which the ball is adapted to project. At the upper end a flange is formed by forcing out the walls from the inside, so as to form an internal groove. The ball is first dropped in through the open bottom, and then a hollow cup-like support of the same diameter as the interior of the casing, is then placed within the latter, with the open end downwards and with the bottom edge on the same level as the bottom of the casing.

The parts are then secured together by closing the bottom edge of the casing over the edge of the internal support. Upon each side of the bottom of the drawer, a race way is provided which is adapted to run upon the balls. This

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rage may be formed by a longitudinal V or semi-circular groove formed down the middle of a plate which is adapted to be secured to the underside of the drawer by screws or otherwise. The balls run in this groove and prevent lateral displacement of the drawer. The groove is preferably formed in a raised middle part of the plate so as to obviate the necessity of cutting away the drawer to accommodate the groove. 5

Dated this 6th day of January 1909.

JOSEPH GEORGE ROLLASON.

By Henry Skerrett,  
Agent for Applicant.

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## COMPLETE SPECIFICATION.

**"Improvements in, and in the Manufacture of, Anti-friction Appliances for use in connection with Sliding Drawers and Analogous Sliding Articles."**

I, JOSEPH GEORGE ROLLASON, of 57, Soho Hill, Birmingham, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:— 15

This invention relates to anti-friction bearings or runners of the ball or roller bearing type for use in connection with sliding drawers and like sliding articles, for the purpose of giving easy running to same and preventing jamming. Said appliances are of that particular type in which the anti-friction devices are located in separate fixed casings or housings carried by the framing or by the drawer or the like, and extend through openings in the crown thereof. The principal object of the present invention is to provide an improved and simplified construction of this type of anti-friction device which is capable of being produced at a low cost. 20 25

Figure 1 of the accompanying drawings represents a series or set of drawers provided with anti-friction devices constructed in accordance with this invention.

Figure 2 shows a longitudinal section through two of the runner fittings of a drawer, the latter being shown partly in section. 30

Figure 3 is a front view of a drawer, showing one of the runner fittings in transverse section.

Figure 4 represents respectively an elevation, vertical cross-section and plan of one of the runner fittings. 35

Figure 5 shows in section the parts of one of the runner fittings separated.

Figure 6 shows a vertical cross-section through a runner fitting having arranged in connection therewith a modified form of bearing or race strip upon the bottom of the drawer.

The same letters of reference indicate corresponding parts in each of the figures of the drawings. 40

Referring to Figures 1 to 5 of the drawings, under each side of the drawer three box-like casings or ball housings *a* are fixed in position without the use of screws, by fitting them into holes formed in the fixed frame *b*, these said carriers being arranged in line along the length of each side of the drawer, and located at suitable points such as two at or near the opposite ends and the third at or about the middle. Each casing or housing contains an anti-friction ball *c* which projects through an opening in the separately attached crown *d* and upon which the drawer is adapted to run. The body part of said casing or housing *a* is of a cylindrical form closed at the bottom but open at the top and 50

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is provided with an annular flange  $a^1$  around its mouth: The ball  $c$  rests upon the apex of a steel conical-shaped support  $f$  placed within the bottom of the casing, said ball being dropped on to the top of the support through the open end of the body so that it projects beyond said end. The crown  $d$  which closes the top of the body consists of a separate sheet metal cap pierced with a central hole  $d^1$ , the diameter of which is smaller than that of the ball and through which the ball  $c$  projects, the greatest diameter of the ball coming below said cap. The latter is secured to the casing by turning the edges under the flanged edge  $a^1$  of the mouth.

10 - The turned over edge of the crown-cap  $d$  acts as a set or stop when the casing is let into the frame  $b$  and thus ensures all the balls projecting a uniform distance above the level of said frame  $b$ .

Upon each side of the bottom of the drawer a metal strip  $h$  is fastened, which serves as a race or bearing which runs upon the balls, thus considerably decreasing the amount of friction between the drawer and its ball or anti-friction bearings.

Referring to Figure 6 of the accompanying drawings, instead of each side of the bottom of the drawer being provided with a strip metal bearing, as above described, a race may be formed by a longitudinal V or semi-circular groove  $i^1$  running down the raised middle part of a plate  $i$  which is secured by any suitable means to the bottom of the drawer. The balls run in this groove  $i^1$  and prevent lateral displacement of the drawer.

In a modification the above described arrangement may be reversed, the balls and housings being let into the drawer, and the bearing strip attached to the frame.

Instead of balls being used rollers may be employed.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

30 First. In drawers and like sliding articles the employment of anti-friction bearings or runners of the type herein referred to, each comprising a hollow casing or housing, a ball or roller contained therein and extending through the crown, and a loose separate conical support upon which the ball or roller rests, said casings or housings being fixed in position without screws or the like, by fitting them into holes formed at separated distances apart in the frame or in the drawer or the like, a circumferential flange being provided around the outer end of the casing to act as a stop, and the ball or roller being run over by, or running upon, a race or bearing strip, substantially as herein described and set forth.

40 Secondly. In drawers and like sliding articles, the employment of anti-friction bearings or runners of the type herein referred to, each comprising a hollow casing or housing having an open end, a ball or roller contained therein, a loose conical support upon which the ball or roller bears, and a separate closure cap provided with a central piercing through which the ball or roller extends and secured to the casing by closing same over a flanged mouth of the latter, said casing being fixed in position at separated distances apart without the use of screws or the like, by fitting them into holes in the frame or in the drawer or the like, a circumferential flange being provided around the outer end of the casing to act as a stop, substantially as herein described and set forth.

50 Dated this 30th day of June, 1909.

JOSEPH GEORGE ROLLASON.

By Henry Skerrett,  
24, Temple Row, Birmingham,  
Agent for Applicant.

SHEET 2

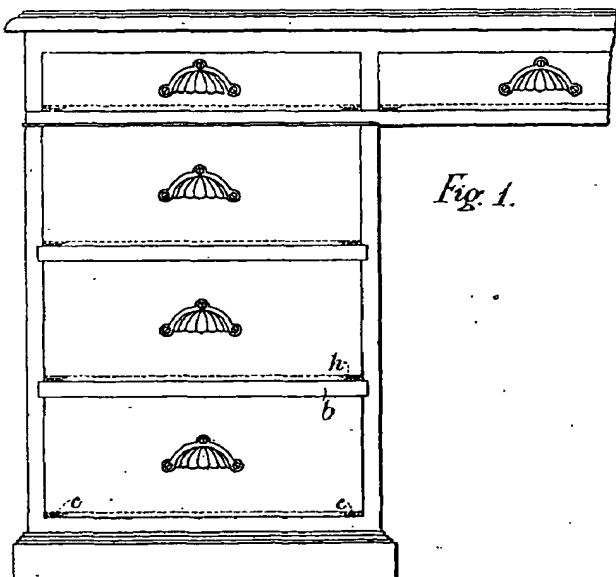


Fig. 1.

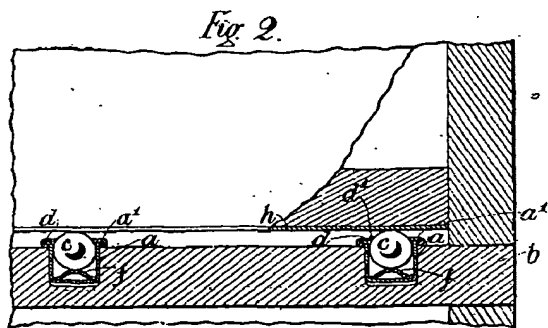


Fig. 2.

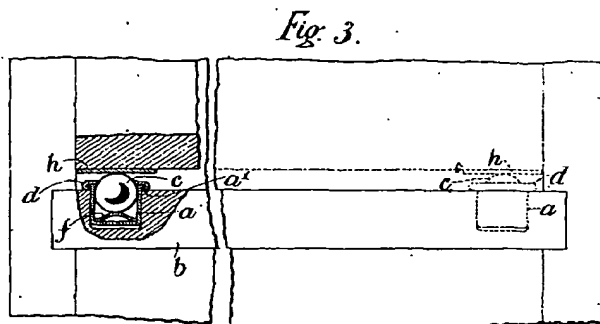


Fig. 3.

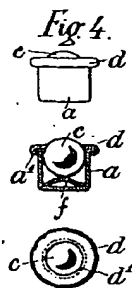


Fig. 4.

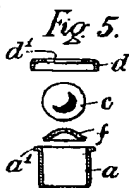


Fig. 5.

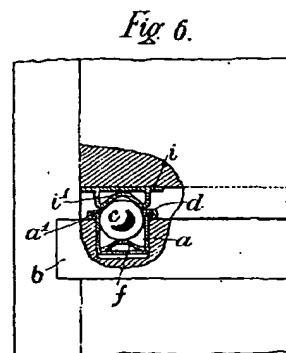


Fig. 6.

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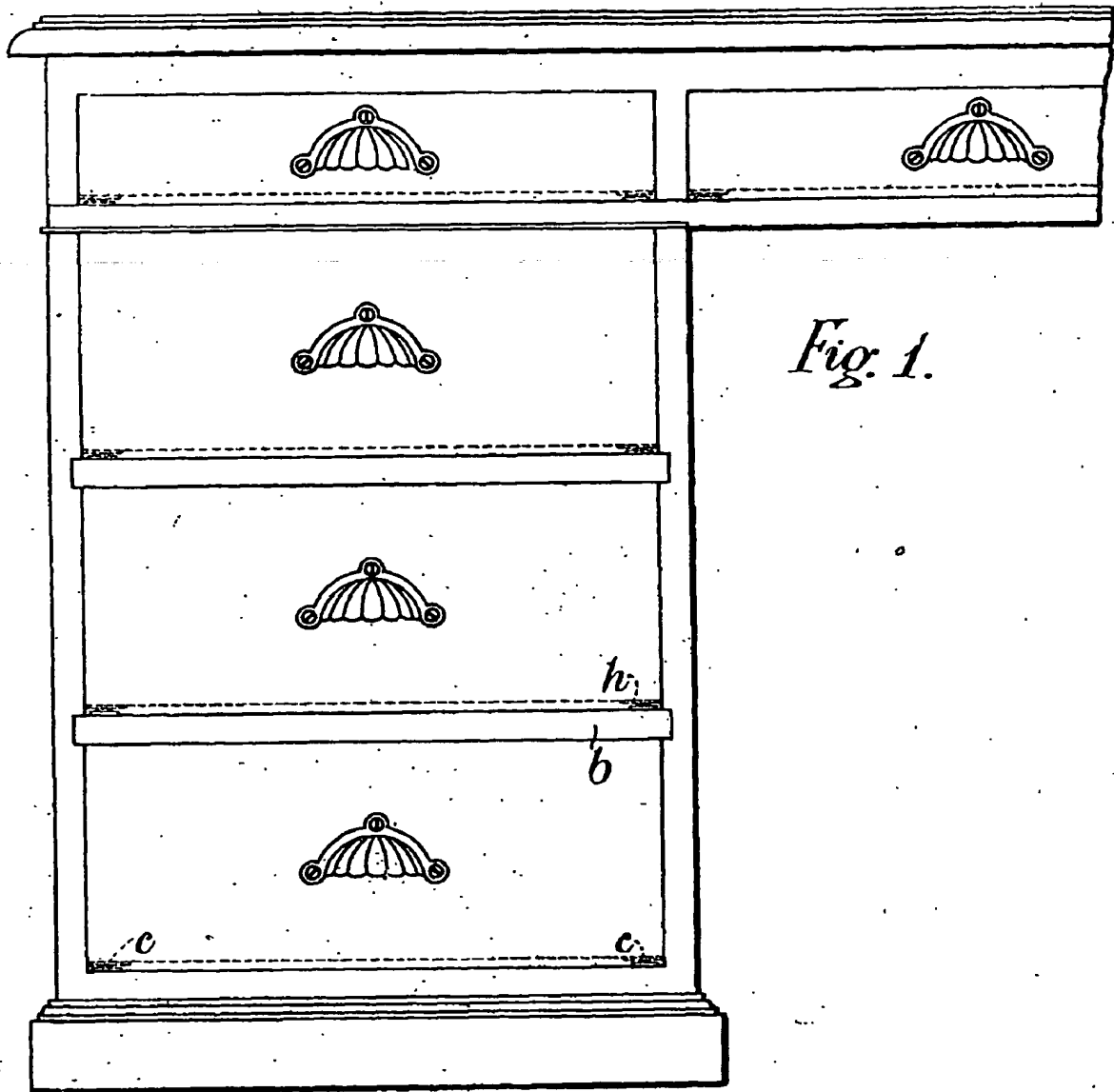
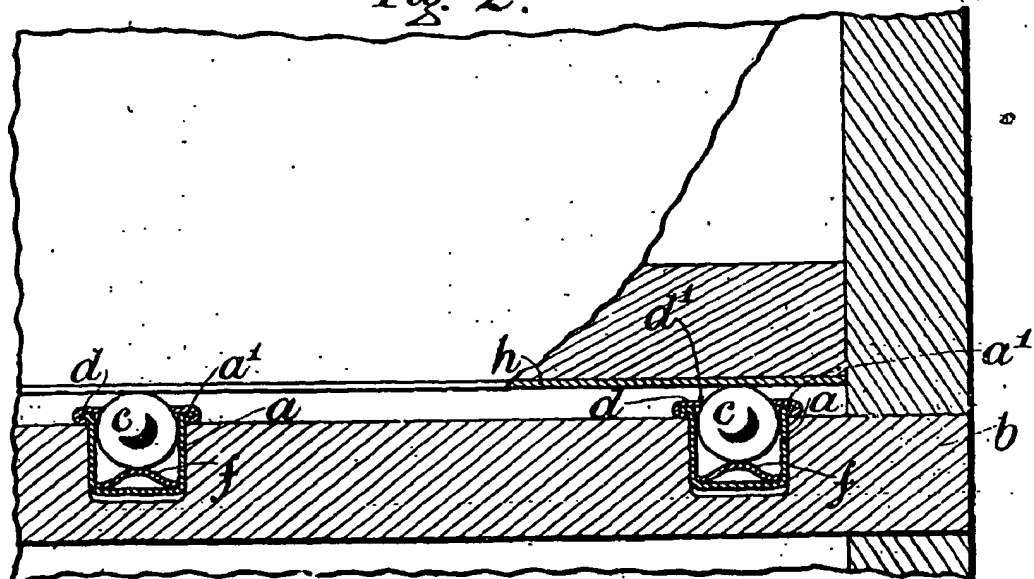


Fig. 2.



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Fig. 3.

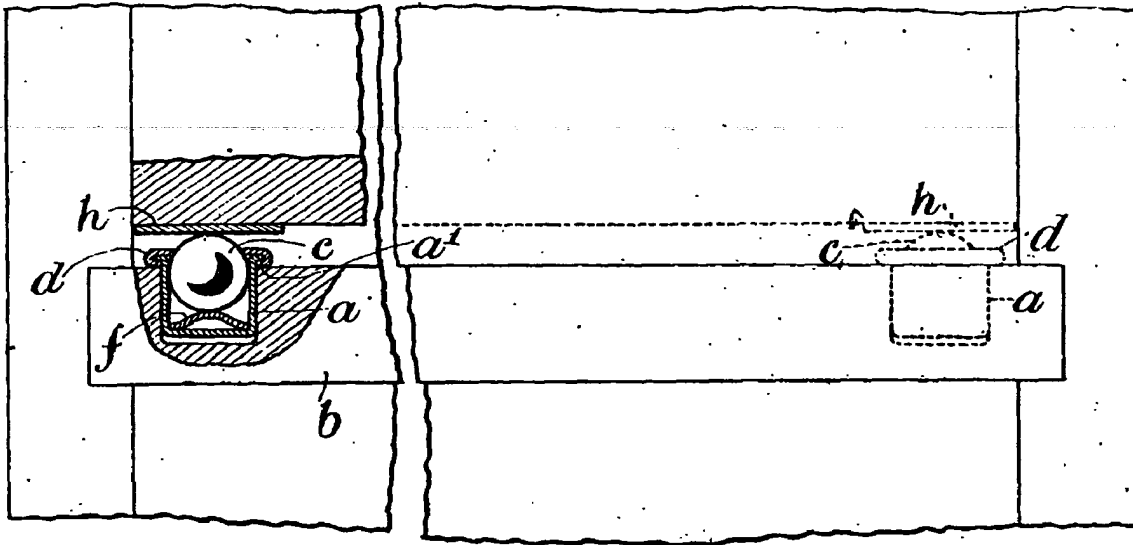


Fig. 4.

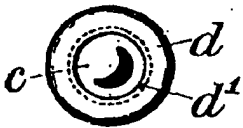
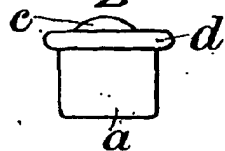


Fig. 6.

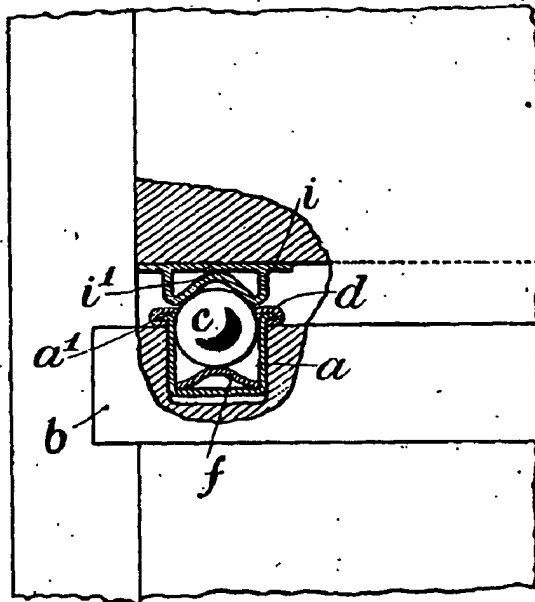
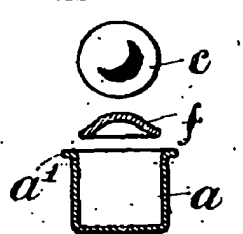


Fig. 5.



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